

GAGAN AR

+91 8197748142 gaganar817@gmail.com [Gagan AR](#)

EDUCATION

Adichunchanagiri Institute Of Technology (VTU)

BE-Electronics&Communication-CGPA-6.5/10

2019– 2023

Chikkamagaluru,Karnataka

TECHNICAL SKILLS

Programming Languages: C, Embedded C, Data structures.

Tools: Ubuntu,STM32CubeIDE, KeilIDE, GCC, Visual Studio Code.

Communication Protocols: Serial-Communication protocols like UART, RS232, RS485, SPI, I2C.

Other-Skills: Network Booting, Linux.

Microcontrollers:STM32F407VGT6,8051, ATmega328P, Node MCU(ESP8266).

Microprocessors: RaspberryPi3b+.

RECENT WORK-EXPERIENCE

Loginware Softtec Private Limited

Septmeber **2023–Present**

Embedded-Developer (1Year 8Months)

Bengaluru,India

- *Experience in Embedded software Development.
- *Complete understanding of Embedded software development with exposure to various 8/16/32/64 micro-controllers and micro-processors.
- *Wired communication protocols UART, SPI and I2C.
- *Responsible for hardware interfacing of display with Micro-controllers and Micro-processors.
- *Responsible for interfacing sensors with Microcontrollers and Microprocessor.
- *Flexible to work on Linux environment.
- *Knowledge on **ARMCortex-M4architecture**.
- *Experience in ST-LINK Debugge.
- *Knowledge on RTOS like RTX and Free-RTOS.

MOST RECENT PROJECTS

Project-1: DRIVER DEVELOPMENT

- **Microcontroller:** STM32F407VGT6.
- **Role:** Embedded Software Developer and Hardware Interfacing.
- **Tools:** Embedded C, STM32CubeIDE, Logical-analyzer.
- **Description:** Driver development for various peripherals as:
 - **UART Protocol:** Communication between Controller to terminal of the system and system to controller for character and string data communication, using both polling and interrupt Method.
 - **I2C Protocol:** This project is interfacing of ADXL345 sensor for the controller using I2C protocol. Then Read/Write operation is done as per the requirement. Using Both Interrupt and Polling Method.
 - **SPI Protocol:** Here the interfacing between controller and RFID, then Read and write the data for the tags. Using both Interrupt and Polling method.
- During this driver development, I also worked on various peripherals like ADC, PWM, etc.
- **Responsibilities:** Understand the STM32F407VGT6 datasheet, enable the required GPIO-pins and clock configurations by using reference manual.
- Develop the code as per the requirements and maintain the coding standards.
- Resolving Integration problems and testing.

Project-2: EAGLE MINI IIOT GATEWAY

- **Microcontroller:** ESP32.
- **Tools:** Espressif IDF, WSL, Vim.
- **Description:** The EAGLE Mini IIOT Gateway is a compact device for industrial use, featuring Ethernet, Wi-Fi, and 4G connectivity. It collects data from machines, sensors, and devices, transmitting it to cloud platforms or on-premise servers for analysis. Supporting Firmware Over-the-Air (FOTA) updates, it ensures efficient device management. This gateway enhances operational efficiency, scalability, and seamless integration of IIOT technologies in manufacturing environments.
- **Responsibilities:** Real-Time Data Acquisition and Secure Transmission using Ethernet, ADC/DAC Interface with FreeRTOS.

Project-3: MANUFACTURING PLANT-MACHINE

- **Language:** C and Shell Scripting.
- **Tools:** Vim, Ctags, cscope, GCC, Make, GDB.
- **Description:** Developed a modular simulation system to optimize manufacturing operations using linked lists for efficient management of plant and machine details. Enabled real-time modeling of production cycles, performance tracking and total production calculations.
- **Responsibilities:** Designed and implemented a modular simulation system for managing plants and machines with real-time performance tracking using C programming and linked lists.

INTERESTS

- Solving algorithmic challenges using C.
- Working with Linux environments for development and debugging.